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COMMISSION ORGANIZATION AND FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS

Equipment Authorization of RF Devices

Title 47—Telecommunication

CHAPTER I—FEDERAL COMMUNICATIONS COMMISSION

[Docket No. 19356; FCC 74-113]

PART 0—COMMISSION ORGANIZATION

PART 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS: GENERAL RULES AND REGULATIONS

Report and Order on Equipment Authorization of RF Devices

In the matter of amendment of Parts 0 and 2 of the rules relating to equipment authorization of RF devices.

1. A notice of proposed rule making in the above-captioned matter was released on December 3, 1971 and was published in the FEDERAL REGISTER on December 8, 1971 (36 FR 23313). The comment and reply comment period was extended by subsequent order released December 29, 1971 from December 30, 1971 and January 17, 1972 to February 15, 1972 and March 1, 1972, respectively. A list of persons commenting is attached as Appendix A.

2. On July 5, 1968, section 302 was added to the Communications Act of 1934 as amended (47 USC 302).[1] This legislation authorized the Commission to make reasonable regulations governing the interference potential of equipment capable of causing harmful interference to radiocommunications and to apply these regulations, to the manufacture, import, sale, offer for sale, shipment, or use of the subject equipment. The first step in the implementation of this authority was the adoption of what are referred to as our marketing regulations.[2] these regulations to the manufacture, seq. of our rules (47 CFR 2.801 et seq.), make it illegal to market equipment capable of causing harmful interference unless any required equipment authorization (type approval, type acceptance or certification) has first been obtained, or where no equipment authorization is required, the equipment complies with the applicable technical specifications prescribed by the Commission.

3. The Commission's new marketing strictures have had a significant impact on manufacturers of RF devices covered by our rules since marketing operations involving such equipment cannot be initiated prior to the receipt of the requisite equipment authorization from the Commission. Additionally, the Commission's marketing rules have brought a number of equipment firms within the Commission's equipment authorization program who were not previously involved. This is attributable to the fact that, whereas equipment authorization was on a voluntary basis with respect to manufacturers producing equipment prior to the effective date of the marketing rules, it is now mandatory. Moreover, in an effort to reduce to tolerable levels the conditions of "spectrum pollution" or "electromagnetic smog", the Commission will be taking an increased role in the regulation of RF devices with an interference potential for which the Commission does not presently prescribe technical standards.

4. The Commission fully recognized that the mandatory nature of its equipment authorization program might necessitate reexamination of its procedural rules. Thus, in adopting its marketing regulations, the Commission stated:

> No changes have been made in existing type acceptance, type approval and certification procedures.
>
> However, as indicated above, we are presently reviewing our regulations to determine what changes are necessary and appropriate in light of this new authority and the rules herein adopted. A further rulemaking proceeding will be instituted to amplify the rules for equipment approval. 23 FCC 2d at 88.

5. As a result of the Commission's review, it was determined that the procedures for granting and administering our equipment authorization program should be made more comprehensive and informative and should be consolidated in one place in our rules. The instant proceeding was instituted to do this. Accordingly in this Order, we have collected and synthesized into one unified subpart most matters pertaining strictly to the procedural aspects of our equipment authorization program. We have added thereto such new regulations that we deemed to be necessary to clarify and make more specific the requirements of this program. These rules are herewith promulgated as Subpart J of Part 2 of our rules and are set out in Appendix C to this Order. It should be noted that the rules adopted herein do not alter any existing substantive requirement or technical specification relating to equipment operation or performance characteristics.

6. We believe that this revision will be helpful in outlining the procedural steps to be followed in acquiring an equipment authorization and that they will make clear to the applicant the conditions attendant to a grant of an authorization and the responsibilities and rights of the grantee. Although most of the requirements are contained in this new Subpart J, it does not mean that all the requirements for a specific equipment will be found therein. Frequently the procedural rules compel the submission of technical data specified in the substantive regulations which may also specify the measurement procedures to be used.

EXISTING PROCEDURAL RULES SUPERSEDED

7. The rules adopted herein as Subpart J supersede the rules in Subpart F of Part 2 and those procedural regulations elsewhere in the Commission's regulations which are in conflict with those in Subpart J. In particular, the procedural regulations in Part 15 dealing with applications for certification (type approval in some cases) of door opener controls, receivers, auditory training devices and field disturbance sensors are superseded. Similarly the procedural rules in Part 18 dealing with applications for type approval of medical diathermy, ultrasonic and miscellaneous equipment and for prototype certification of industrial heating equipment are superseded. The Commission will amend these parts as soon as possible to incorporate these changes. In addition procedural provisions in other rule parts will be deleted.

COMMENTS RECEIVED IN THIS PROCEEDING

8. A list of parties commenting in this proceeding is attached as Appendix A. Gamewell Radio Systems (a Gulf and Western Systems Company) supported the Commission's proposal without reservation. GTE Lenkurt submitted a statement concurring in the GTE Sylvania comments. NAM submitted a statement supporting the AFTRCC[3] comment. AT&T submitted a comment on behalf of itself, Bell Telephone Laboratories and Western Electric Co. The comments received generally supported the Commission's intent to collect in one place all its requirements with respect to equipment authorization. Notwithstanding the general concurrence in this basic purpose, a number of major objections were raised. In addition numerous comments were received dealing with the text of the regulations that had been proposed. The major objections dealt with the question of bilateral certification particularly with respect to industrial, scientific and medical (ISM) equipment, with the time frame within which a grant will be made and with the question of disclosure of the data filed with an application for an equipment authorization. These objections are discussed in detail in the paragraphs below. The comments relative to the text of individual proposed regulations are considered in connection with the discussion of the individual regulations.

BILATERAL CERTIFICATION

9. The Commission has in the past provided for a "self-certification" procedure for most equipment operated without individual license under Parts 15 and 18 of our rules. Such "self-certification" merely required the user to perform certain engineering tests on the device and attach a label to his device "certifying" that the device had been tested and found to comply. In many cases, notably with respect to receivers and low power communication devices under Part 15, the manufacturer performed these tests voluntarily as a service to his customer and labeled the equipment. This system of "self-certification" has not proved entirely satisfactory in practice. Accordingly, we will now require that where the rules call for the equipment to be certificated, the equipment must receive such certification from the Commission prior to marketing. A grant of certification will be based on a review of test data and other relevant information specified in the rules adopted herein and required in the substantive Part of the rules under

[1] Pub. L. 90-379, approved July 5, 1968, 82 Stat. 290.

[2] Docket No. 18426, Report and Order adopted May 13, 1970; 35 FR 7894; 23 FCC 2nd 79.

[3] See Appendix A for the acronyms used in this Report.

which the equipment operates. With respect to receivers, such a program of bilateral certification has already been implemented by voluntary cooperation of the manufacturers involved. Accordingly the rules adopted herein formalize a de facto procedure which was recognized as such by some of the parties who commented.[4]

10. Other comments objected to bilateral certification on the grounds that increased costs would be incurred. In order for a manufacturer to determine that such a device meets the Commission's technical specifications and can be self-certificated, a series of measurements must be made. The same measurements will, in general, be required under our program of bilateral certification. Accordingly, the only increase in cost to the manufacturer, is the administrative cost of filing the application for certification and deferring marketing until the Commission's grant of certification is received. On the other hand bilateral certification is imposed to carry out the intent of the authorizing legislation (47 U.S.C. 302) to provide reasonable assurance that equipment placed in the hands of the public is not likely to become a source of harmful interference. Under these conditions, the Commission cannot accept the objection to bilateral certification because of alleged increased costs.

11. Although AT&T basically concurs in these rules, it objects to the requirement for bilateral certification of RF devices used in research programs on the grounds that such a requirement will reduce the flexibility available to the user in how the equipment is used and that it will delay changes required to be made in equipment used in in-plant research programs. AT&T urges that provision be made for expedited action when such a need can be demonstrated. The problem of relocating equipment within a plant, or even moving it from one plant to another is a user problem in connection with the filing of Form 724 to advise the Commission of the location of industrial heating equipment and is outside the scope of this proceeding. This problem will be considered when Part 18 is conformed with the rules adopted herein as discussed in paragraph 7 above. In so far as expediting action on requests for certificated equipment, the Commission has always been responsive when a satisfactory showing of need has been presented and will continue to do so in the future.

12. A further objection to our proposal to impose a bilateral certification procedure on industrial, scientific and medical (ISM) equipment operated under the provisions of Part 18 of our Rules, was raised by persons concerned with the manufacture and use of such equipment. In general these comments contended that the equipment authorization procedures presently in use under Part 18 are adequate to provide the protection against harmful interference sought by section 302 of the Communications Act. It was argued therefore that bilateral certification was not necessary and should not be imposed on equipment operating under Part 18. It would appear that many of those commenting on this subject have misconstrued the intent of this proceeding.

13. The regulations in Part 18 currently in effect apply strictly to the user or operator of the equipment. Provision is made in the present Part 18 rules for the manufacturer to acquire an equipment authorization on a voluntary basis as a service to his customers. Thus type approval is granted on request to manufacturers for medical diathermy equipment operating on the assigned ISM frequencies. A similar type approval procedure is made available on a voluntary basis to manufacturers of ultrasonic equipment subject to Part 18 of our rules. Prototype certification may be voluntarily requested by the manufacturer of industrial heating equipment.

(14) The advantage to the manufacturer should be obvious. ISM equipment bearing the type approval number issued by the Commission, or the manufacturer's label certifying that it had been prototype certificated, may be freely operated by the purchaser with confidence that the equipment can reasonably be expected to comply with the technical specifications in Part 18. If prototype certification has been granted by the Commission, the purchaser files an abbreviated registration on Form 724 with the Commission, certifying basically that the equipment was installed pursuant to the manufacturer's installation instructions. Without such type approval or prototype certification, the purchaser must arrange for measurements to be made to demonstrate that the equipment he has purchased complies with the technical specifications in Part 18. The cost of such measurements to the user is considerable and may, in some cases, be as high as the original cost of the equipment. On the other hand, when the cost of testing is borne by the manufacturer and is distributed over a quantity of similar equipment, the cost per equipment (which is passed on to the purchaser) is considerably less.

15. Our intention regarding ISM equipment in this proceeding was to impose, pursuant to section 302 of the Communications Act (47 U.S.C. 302) an obligation on the manufacturer to provide equipment that can be expected to comply with our technical specifications. For those manufacturers currently applying for and procuring type approval or prototype certification this obligation consists merely in converting the present voluntary procedure into a mandatory requirement. For the other manufacturers of ISM equipment—those who do not produce equipment in quantity or those who produce large equipments that do not lend themselves to measurement on a test site—changes are anticipated.

16. Most of the objections raised against our proposal for bilateral certification for industrial heating equipment deal with the problem posed by the latter group of equipments. The Commission recognized this dilemma when our marketing rules were adopted and as an interim measure exempted many of the ISM equipments from the requirement for procuring an equipment authorization as a prerequisite for legal shipment and sale. In response to these objections, and notwithstanding our professed objective of ensuring that equipment complies with our requirements prior to shipment and sale, we are revising the rules for certification of ISM equipment originally proposed in this proceeding. Those industrial heating equipments which will be produced in quantity and which lend themselves to testing on a test site will become subject to mandatory bilateral certification. Those larger industrial heating equipments which are not produced in quantity, or which are custom built, and which are not susceptible to measurement on a test site, will continue to be tested on-site under the procedures set out at present in Part 18. As stated in our Notice in this proceeding further rule making will be instituted to amend Part 18 to clarify these requirements and to put these new procedures into effect for ISM equipment.

Disclosure of Information Relating to an Equipment Authorization

17. In the Notice, we also proposed the amendment of our Freedom of Information Rules as they concern the disclosure of information submitted by an applicant for equipment authorization or otherwise ascertained by the Commission in connection with such application. In adopting our current Rules (§ 0.457(d)) some six years ago, we continued the previously existing confidential status of such data and provided that the technical data submitted with such applications and Commission laboratory tests on the equipment are not available for inspection except as such data is set out in the radio equipment list issued periodically by the Commission. Disclosure of such information required a persuasive showing as to the reasons for inspection of such data set forth in accordance with the provisions of § 0.461 of the rules.

18. The revision of § 0.457 adopted herein would eliminate the confidential status automatically accorded such data and would make them generally available for public inspection after the effective date of the equipment authorization issued by the Commission. Following such date, such applications and related materials, including technical specifications, test measurements, etc., would be available for inspection upon request. However, since our equipment authorization files are not maintained in a public reference room, we are not making them "routinely available for inspection" as originally proposed but rather we have provided that they shall be available

[4] GTE-Sylvania noted that this requirement appears to be no more than a recognition of existing practice with respect to manufacturers. AT&T notes that the revision codifies many existing practices not covered in the present rules and will contribute to sound and workable equipment authorization procedures.

upon request made under § 0.461 of the rules but without the necessity for a persuasive showing as to the reasons for inspection of such data.

19. The revised rules are consistent with the requirements of the Freedom of Information Act, 5 U.S.C. 552 and judicial interpretation thereof [5] and information in the possession of the Commission shall be available for inspection and disclosure except to the extent that it would disclose trade secrets or other proprietary information. An applicant for equipment authorization may still submit a request for nondisclosure of information or data claimed to be a trade secret or proprietary information, pursuant to § 0.459 of the rules, with a statement of the basis for such claim. In such case, the applicant must substantiate the fact that his material merits confidential treatment,[6] and should the Commission approve such claim, the subject information will be maintained on a confidential basis subject to the provisions of § 0.461.

20. Under the revised rules, the applicant for an equipment authorization for a new device is assured that its existence and design will not be disclosed from Commission records prior to the effective date of the equipment authorization granted by the Commission. Premarketing information in the competitive communications equipment field clearly falls within the trade secrets category and Commission recognition of this through a general provision guarding against disclosure at this stage is fully justified under traditional trade secrets standards. The effective date of the Commission authorization will be, upon request, deferred to a reasonable date specified by the applicant, and thus a manufacturer, by specifying an effective date for the authorization which coincides with commencement of his marketing activities can preserve his competitive position. This will also accord with the provision of § 2.801 of our rules, which prohibits the marketing of such equipment without Commission equipment authorization.

21. The proposed amendment recognizes that trade secrets and commercial or financial information obtained from any person and privileged or confidential would not normally be made available to the public. The amendment does recognize, however, that in the area of equipment applications it is in the public interest to make available, upon request, information which has lost its confidential character by virtue of the marketing of the equipment to which it refers. Putting an article on the market constitutes a general disclosure to the public which reveals the secret, invention or discovery and divests the article of its confidential character.[7]

22. Some of the comments received in this proceeding suggest that the materials submitted by an applicant for equipment authorization be deemed trade secrets or proprietary simply upon the applicant's designation thereof with limited or no review by the Commission. Such an approach would not be in accord with the existing law nor with the provisions of § 0.459(b), which requires the applicant to fully support his claim for confidential treatment. This requirement is not an undue burden upon the applicant, for he is in the best position to know the facts and circumstances which support his request for confidentiality. Accordingly, the Commission must insist that requests for confidentiality be individually justified pursuant to § 0.459.

23. Other comments suggest that confidential treatment be automatically accorded applications for equipment authorization and related materials for a period of one year commencing either with the date of the grant of equipment authorization or with the date that the equipment first goes into public use. While recognizing that there may be unusual circumstances in individual cases which support the confidential treatment of such data after the effective date of the Commission grant of equipment authorization, we are unable to perceive any valid basis for a blanket a priori determination of confidentiality extending beyond the effective date of the Commission's grant as set forth in the rule we adopt today. As discussed above, the existence and design of a new device clearly fall within the trade secrets category prior to the commencement of marketing activities in a competitive field. Since such devices cannot be marketed prior to the grant of equipment authorization, nondisclosure is justified during the application process and until the equipment authorization is granted. It also appears justifiable to continue such confidential treatment for a reasonable time after the grant of equipment authorization to permit the manufacturer to make his own determination as to the appropriate commencement of marketing activities in a competitive field. To accomplish this, the rules adopted herein permit the applicant to suggest the earliest effective date for the Commission's grant, which will fit in with his marketing plans. It must be recognized of course that if a grant is issued with a deferred effective date pursuant to the request of the applicant, this deferred effective date becomes the earliest date that the applicant (or his distributors, vendors or others) may legally ship, sell, offer for sale or otherwise market the equipment in question.

24. The comments also raise the question of the status of materials already submitted and filed with the Commission prior to the effective date of the changes in the rules we are adopting today. Although the notice did not deal directly with this question, it is the Commission's view that equipment authorization information filed with the Commission under rules which accorded them confidential treatment should continue to be accorded confidential treatment and subject to disclosure only under the provisions of § 0.461 upon a determination by the Commission that disclosure would be in the public interest.

Time Frame for Grant of an Equipment Authorization

25. Collins, AT&T, Branson Instruments, EIA–BES, EIA–CEG, EIA–Land Mobile and GTE–Sylvania call attention to the fact that the rules proposed in this proceeding have omitted any mention of a time frame within which the Commission would respond to an application for an equipment authorization. It is pointed out that such a provision is presently included in § 2.571(c) which provides for an automatic grant of type acceptance after 30 days, if the Commission has not acted affirmatively on the application within that period. On the basis of this provision, the argument continues, industry has learned to include the 30 day period for grant of type acceptance in its design and production schedules for bringing a new product into production. It is contended further, that the deletion of this provision would introduce an untenable element of uncertainty into the involved process of putting a product on the market. In the same vein, EIA–CEG and others argue that a time limit [8] be imposed with respect to applications for certification although no such provision is currently in effect.

26. The Commission cannot accept these arguments. With an equipment authorization serving as a de facto authorization to market equipment, the authorization must be based on a positive finding by the Commission, and cannot be based on the mere passage of time. The Commission must accordingly deny the request for the automatic grant of such an authorization. On the other hand, the Commission recognizes the problems posed to industry if the issuance of such grants is unduly delayed. It accordingly commits itself to acting promptly on these applications. We take this opportunity of assuring industry that we propose to continue acting on applications for equipment authorization within the 30 day time frame that industry has learned to live with. In fairness to all, applications will be processed in order of receipt.

Non-Assignability of Equipment Authorization

27. In order to establish responsibility for continued compliance over devices produced under an equipment authorization and to facilitate orderly administration in terms of who is producihg what devices under which grant, it is obvious that the Commission cannot permit the free exchange, transfer or assignment of

[5] Consumers Union v. Veterans Administration, 301 F. Supp. 796 (S.D.N.Y. 1969), 436 F. 2d 1363 (2d CIR. 1971), Wellford v. Hardin, 444 F. 2d 21 (4th CIR. 1971).

[6] FCC v. Schreiber, 381 U.S. 279 (1965).

[7] Newell v. O.A. Newton & Son Co., 177 F. Supp. 291 (S.D.N.Y. 1959).

[8] EIA Consumer Electronics Group recommends that an application for certification shall automatically be granted in 14 days in the absence of affirmative Commission action prior thereto.

equipment authorizations. However, in recognition of customary commercial practices, the Commission realizes that a grantee of an equipment authorization may wish to augment his production capabilities through the use of one or more subsidiary contractors. Also, a particular grantee may wish to permit a second party (manufacturer or vendor) to produce and/or market the device using an established trade name. Accordingly, the rules adopted herein permit licensing (or similar arrangements) of manufacturing or other commercial rights on the part of the grantee of an equipment authorization. Such licensing agreements may be effected subject only to notification of the agreement to the Commission. (See also the discussion in paragraph 37 below.)

28. Two things, however, should be fully understood with respect to the above described arrangements: (1) The grantee of the equipment authorization shall remain responsible to the Commission for the continued conformance of the equipment to the model reviewed by the Commission and shall exercise a high degree of diligence in assuring such conformance; and (2) The device must be marketed under the name and number submitted to the Commission in the original application. Any changes in the name or number of the equipment from those originally specified by the applicant will necessitate the filing of a new application. The rules also require notice to the Commission in cases of a transfer of control of a grantee, as in the case of merger or absorption of the grantee by another entity. This requirement will reestablish responsibility for the equipment in the new controlling party and inform such party of the duties and limitations accompanying a grant of equipment authorization. Depending on the circumstances of the particular case, the Commission may require a new application for equipment authorization from the new entity.

IDENTIFICATION OF EQUIPMENT

29. In § 2.925 of our proposed regulations, a requirement was set out for the identification of an equipment for which an equipment authorization was required. The need for a distinctive and specific identifier should be obvious and was not questioned in the comments.

30. In our type approval program an FCC Type Approval Number is issued by the Commission for many (but not all) the equipments tested at our laboratories. While this FCC Type Approval Number could be used as the distinctive identifier, we are reserving its use to indicate that the particular equipment had been tested by the Commission. Accordingly, for type approval, we are requiring that the equipment carry both the manufacturer's assigned identifier and the FCC Type Approval Number. For type acceptance and certification the Commission does not assign any identifying numbers but has agreed to accept the specific identifier assigned by the grantee, and this is the number that we require to be inscribed on the equipment.

31. A grant of an equipment authorization is valid only for the equipment bearing the identical model or type number set out therein. An equipment bearing a different model or type number, no matter how slight the difference—including such apparently insignificant changes as the addition of a suffix letter(s)—is considered a new equipment under this procedure and requires its own grant of equipment authorization. This rigidity must be imposed to preclude any possibility of ambiguity, to accommodate the Commission's present electronic data processing equipment which is used in the publication of our Radio Equipment List, and particularly, in anticipation of expanded use of electronic data processing within the next few years for application processing and for storing and retrieving information concerning grants of equipment authorizations.

32. Accordingly the Commission must deny the request to issue an equipment authorization for a family of equipments that are claimed to be nearly identical. If the manufacturer finds it to his advantage to make changes in the model or type number for production, sales or any other reason we must insist that the manufacturer request an individual grant of type approval, certification or type acceptance for such equipment. However, recognizing that many such equipments are in fact electrically and mechanically identical, we have simplified our application requirement for such similar equipments. In lieu of the detailed report of measurements and other information required with the application, the manufacturer may submit a statement indicating:

The model or type number of the previously authorized equipment.

The date when certification, type acceptance or type approval was granted.

How the new equipment differs from the previously authorized equipment.

That the data previously filed with the Commission is representative of and applicable to the new equipment for which an equipment authorization is requested.

Thus the only new data that must be submitted is that which concerns the changes made by the manufacturer. If these involve cosmetic changes, new photographs must be submitted showing the external appearance of the equipment.

DISCUSSION OF INDIVIDUAL REGULATIONS

33. *Section 2.903.* Amana Refrigeration, Inc. objected to the use of the word "identical" in the proposed § 2.903(b) which states that type approval attaches to all units which are identical in all respects to the sample tested by the Commission. Amana, recognizing minor differences due to production line tolerances, suggests the substitute phrase: "* * * mechanically identical in all significant respects." The Commission recognizes the validity of this argument and has added a new provision § 2.908 to define what we mean by the term identical as being:

Identical within the variation that can be expected to arise as a result of quantity production techniques.

34. *Sections 2.905 and 2.907.* EIA–BES requests a change in the wording of proposed § 2.905(b) to permit a manufacturer to make available a sample unit of type-accepted equipment, currently in production for inspection and test. EIA–CEG objects to the requirement in § 2.907(a) for the submission of test data and suggests that a summary of data, as presently required by § 15.69(e)(6) should be sufficient. AFTRCC, SPI, and Mann-Russell Electronics Inc., point out that proposed § 2.907(b) may be unreasonable in many instances. Due to size and power limitations, it is not always practical to submit to the Commission's laboratory for further testing many equipments that are certificated under Part 18. It would appear that the intent of the proposed provisions in §§ 2.905(b) and 2.907(b) had been misconstrued. To clarify this intent, we have deleted §§ 2.905(b) and 2.907(b) and have added a new § 2.943 which makes it clear that the Commission reserves the right to require a sample to be submitted for testing when it has reason to question the adequacy of the data or the suitability of the measurement procedure that was used. In addition a proviso is added under which the applicant may explain why such a submission should not be required. The Commission cannot accept the suggestion to use "summary of data" in our regulations. Our experience has been that some manufacturers have supplied a mere statement of compliance in their interpretation of the words, "a summary of the data obtained." It is for this reason that the Commission feels justified in requiring actual test data rather than a summary. Actual test data have been required under the type acceptance rules for many years and applicants have not objected to this practice as unduly burdensome. Moreover, the Commission is in fact accepting a summary of the measurement data with applications for certification of FM and TV receivers when it accepts a report of measurements filed on EIA's standardized report form.[*]

35. *Section 2.909.* In commenting on on the wording of proposed § 2.909(b) which would require the submission of equipment manuals and other printed material with the application for equipment authorization, EIA–BES suggests the addition of the words "when available" for consistency with other sections of the rules. The Commission, recognizing that manuals are not always available at the time application for an equipment authorization is submitted has made provision for submitting such material at a later time. LPB, Inc., a manufacturer of transmitters used in carrier current systems, contends that such systems must be certificated as a system—that certificating merely the transmitter will serve no useful purpose. The Commission agrees. In a separate rule making

[*] This form is described in EIA. Consumer Products Engineering Bulletin No. 4, June 1971.

relating to Part 15 it is revising its regulations to cover this situation. Specific requirements for the component parts of a carrier current system will be set out therein.

36. *Section 2.919.* In commenting on proposed § 2.919(b) EIA–CEG objects to the provision that would make the failure to supply additional documents or information not specifically required by this Subpart, a basis for the denial of an application. EIA–CEG claims that an applicant should not be required to supply data or meet requirements not specifically set out in the rules, and suggests that this provision be limited to documents or information required elsewhere in the rules. IEEE High Frequency Heating Committee points out that proposed § 2.919(b) is so broad that an application could be denied if the applicant fails to submit any type of information that might be requested regardless of its applicability to the pending application. The Commission has accordingly changed this provision to make it a basis for dismissal of the application instead of a denial.

37. *Section 2.925.* This section deals with the identification of the equipment which is discussed in some detail in paragraphs 23–26 above. The comments do not question the need for a distinctive identifier, but some questions were raised concerning the placement and visibility of the required identification label. In commenting on the requirement for an identification plate or label permanently and conspicuously affixed to equipment so that it is readily visible from a normal position of installation both DORCMA and Mosler Safe request exemptions for garage door openers and intrusion detectors respectively. DORCMA states that the garage door opener receiver is frequently "buried" in the door operator so as not to be visible after installation. DORCMA further states that door opener transmitters are often installed under automobile dashboards. Mosler Safe states that many of its purchasers request unobtrusiveness in the installation of intrusion detectors and moreover, in some cases, these devices may be installed as high as twelve feet from the floor of a protected area. EIA–CEG prefers placing labels on the bottom of radio or television receivers so as not to spoil the aesthetic value of the front or rear of cabinets and points out that space or ventilation is often a consideration for not using the rear surface. Branson Instruments calls attention to the need to identify equipment by its customer's name as many of its customers object to the use of the source manufacturer's name on equipment they purchase from Branson. Purchase agreements of this nature often stipulate "private labeling". The Commission, considering these comments has modified this requirement to permit "private labeling" in the case of certificated equipment and to eliminate the equipment that the label be readily visible after installation.

38. *Section 2.929.* In connection with the nonassignability of equipment authorizations, Mosler Safe, EIA–CEG and EIA–BES object to the proposed § 2.929 (a) which requires that a copy of a licensing or similar agreement be forwarded to the Commission within 30 days after the execution of such agreement. Mosler does not believe the Commission should be in a position to approve or disapprove licensing or similar agreements. EIA–BES objects on the basis that such business agreements or contracts usually contain conditions which are not related to equipment authorization. In view of these objections, this requirement has been revised to require merely that the Commission be notified of the existence of a licensing agreement. On the same subject EIA–CEG contends that the original grantee should not continue to be responsible to the Commission for equipment produced pursuant to licensing agreements as proposed in § 2.929(b) unless he can reasonably be assumed to know of a violation. Accepting this argument would be tantamount to permitting a grantee to transfer or assign his grant of equipment authorization and we must insist that the grantee continue to be responsible, for all equipment produced by a second party under such a licensing arrangement. If the grantee finds this requirement burdensome, he is of course free to require that his assignee apply for and receive an equipment authorization in the name of such assignee. Conversely, a manufacturer may not produce an equipment identical to one for which an equipment authorization had been issued to another person and which would bear the identical name and number given in such authorization unless such manufacturer has, in fact, been authorized to do so by the grantee of such authorization.

39. *Section 2.931(a). In connection* with proposed § 2.931(a), wherein a grantee warrants that each completed item of equipment will conform to the design and operational characteristics approved by the Commission, Amana Refrigeration, EIA–BES and EIA–CEG object on the basis that compliance is impossible because of manufacturing tolerances and differences in vendor component variations. Amana, therefore, would like to see deletion of the words, "* * * operational characteristics required * * *" instead of "* * * approved * * *". The intent of the rule is not to require all subsequently produced units to conform exactly to the characteristics reported to the Commission for the unit tested. Rather, the objective is to assure that authorized equipment conforms to pertinent requirements of the Commission's rules and that those technical characteristics of the equipment which are subject to Commission rules remain within the ratings established in the application and approved by the Commission at the time of grant, including any subsequent changes that are authorized by the Commission. This requirement is particularly pertinent for transmitting equipment which has been type accepted for licensing. For instance, if no more were required of the grantee of type acceptance than to keep the characteristics of subsequently produced units within Commission rule requirements or limitations, he would be free, in many cases to make very substantial changes in power, emission, circuitry, and other parameters of the transmitters without Commission knowledge or approval. This could result in serious impairment of the Commission's ability to administer licensed radio services. It is essential, therefore, that the technical characteristics of units produced pursuant to an equipment authorization be maintained within the limits or ratings, established by the grantee in his application. However, in consideration of the comments on this rule, we are revising the language to make the intent clearer.

40. *Section 2.931(b).* In commenting on proposed § 2.931(b), EIA–BES objects to submission of "design drawings" or "complete and current record of production inspection and test procedures," claiming that "this would place the Commission in the position of reviewing, and perhaps controlling, industry's competitive design and production techniques." The Commission does not agree with this viewpoint. Merely having access to drawings, specifications and test procedures would not derogate or control a competitive position. Many government agencies, through their inspection procedures, already have this type of access. As proposed, the rule applies only to the drawings, specifications and test procedures "employed to ensure compliance with pertinent technical standards and conformance with the design and operational characteristics of the equipment originally approved." The Commission finds that adoption of this rule would provide it with some degree of assurance that compliance with its technical standards persist beyond the initial grant of the authorization which is based upon data obtained from a single unit of equipment.

41. *Section 2.933.* In commenting on proposed § 2.933(a)(3), DORCMA expresses the opinion that there is no justification for requiring a new application and fees upon sale or merger of the grantee when there is no change in design, construction, equipment name or model number. DORCMA states that the acquiring firm in the transfer of control of business assumes the liabilities of the acquired company and concludes that the responsibility imposed by § 2.931 would be assumed by the acquiring firm as a matter of law. We do not deny this fact. However, accepting the legal responsibility required by § 2.931 carries no assurance that the acquiring company will have the technical and production capability to actually meet this legal responsibility. We recognize that under some circumstances involving sale or merger of the grantee, there would be no necessity or justification for insistence upon new applications and fees. In other cases, however, the sale or merger of the grantee may cause considerable disruption in operations, production facilities, personnel, procurement of components and other factors, all of which could seriously affect the final product. Therefore,

we have modified the language of the rule to indicate that the Commission may require the submission of new applications and fees, depending upon the circumstances of the merger or sale. If the acquiring firm is required to file a new application, the purpose would be to demonstrate to the Commission that the acquiring firm has the technical and production capability of meeting the obligations of a Commission grantee. Failure by the Commission to impose this responsibility when necessary, and to obtain assurance that the equipment in fact remains identical to that originally authorized would defeat the very purpose of the equipment authorization program. Insofar as § 2.933(a)(2) is concerned this does not involve any significant change from the status quo. At the present time, our rules concerning fees for equipment authorization[10] indicate that applications for authorization of equipments bearing different identifications are considered separate applications regardless of whether such equipment may be otherwise identical.

42. *Section 2.936 (2.935 in NPRM).* GTE Sylvania, Amana Refrigeration, EIA-Japan, EIA-BES, EIA-Land Mobile and the Votator Division have all filed comments relative to several paragraphs of the proposed § 2.935. Some of these organizations object to the access that the Commission would have to control procedure, inspection, test data, materials and testing apparatus (proposed § 2.935(b)). The Commission by this requirement entertains no desire to control industry's competitive practices. On the contrary, the Commission considers that only by retaining the right of review can it attain a reasonable degree of assurance that the equipment for which it grants authorization will continue to maintain the characteristics upon which the grant was made. There is, however, a strong consensus among almost all of these organizations expressing a strong objection to the proposed § 2.935(e) which requires making available for inspection, upon the request of the Commission, the sales and marketing records pertaining to "the device" for the previous three years. The objections, for the most part, are based upon the proprietary nature of such information. The Commission yields to these objections and has deleted proposed § 2.935(e) from the rules adopted herein.

43. *Section 2.937.* LPB, Inc., GTE Sylvania, Amana Refrigeration, EIA-Japan, EIA-CEG, EIA-Land Mobile and the Votator Division have all filed comments on § 2.937 regarding the responsibility of the grantee to correct equipment defects. Practically all of these comments contend that manufacturers should not be held responsible for alleged interference complaints when the fault may lie with the user, especially since many interference complaints are often caused by improper operation or actual misuse of the equipment. The Commission, recognizing the validity of these objections, has revised the wording of § 2.937 to clarify the responsibility of the grantee in this area.

44. Section 2.939. Comments were filed by Amana Refrigeration, EIA–CEG, EIA–BES, SPI, IEEE and Mann-Russell concerning proposed § 2.939, regarding revocation or withdrawal of an equipment authorization. In proposed § 2.939(a)(1), EIA–CEG recommends deletion of the reference to § 2.935(e). For the reason given in paragraph 36 above, the Commission has deleted this reference. EIA–BES recommends a change in § 2.939(a)(2) which deals with revocation of equipment authorization if upon subsequent inspection or operation it is determined that the equipment does not conform to the pertient technical requirements or to the representations made in the original application. The recommended change would allow for operational or maintenance problems by substituting the words, "* * * is not capable of conforming * * *" in place of "* * * does not conform * * *". The Commission will not adopt the suggested change. The requirement that equipment conform to the pertient technical requirements or to the representations made in the original application is not unreasonable nor does it mean that the authorization will be withdrawn if there is an isolated operational or maintenance problem. EIA–BES, commenting on § 2.939(a)(3), which deals with revocation of equipment authorization if it is determined that changes have been made in the equipment other than those authorized by the rules or otherwise expressly authorized by the Commission, recommends the addition of the words, "* * * the authorization will not cover the modified equipment". The Commission does not deem it advisable to add the wording suggested. In the case of such unauthorized changes, the equipment authorization no longer applies and the Commission will revoke the authorization. Amana Refrigeration, SPI, Mann-Russell, and IEEE, in commenting on § 2.939(c), recommend that manufacturers be allowed some period of time to comply with changes in the Commission's technical standards. The Commission has always provided a reasonable amortization period for non-conforming equipment when new technical standards have been promulgated, except in those situations where it had good cause to require immediate compliance with the new standards. However, the text of this regulation was revised to reflect this practice.

45. *Section 2.963.* Amana Refrigeration, EIA–BES and EIA–Japan have filed comments concerning the proposed § 2.-963. Both Amana and EIA–BES contend that instruction manuals may not be available at the time type approval is requested. The Commission has modified this provision and will permit the instruction book to be submitted within 60 days after the grant of type approval. EIA–Japan suggests that application forms be specified for type approval as they are for type acceptance and certification. Subsequent to the release of the notice of proposed rule making in this proceeding, the Commission issued Form 729, Application for Type Approval. Reference to this form number has been included in § 2.963.

46. *Section 2.967.* Litton/Atherton, Amana Refrigeration and AFTRCC consider too stringent the proposed § 2.967(a) that requires a new type approval application and grant for any mechanical or electrical change whatsoever. All three of these organizations recommend permissive changes as allowed for type acceptance and certification. The Commission's type approval program differs from those of type acceptance and certification. With the latter two types of equipment authorization the Commission reviews measurements made by manufacturers. With type approval, measurements are made by the Commission's Laboratory. This is done for good reason on those types of equipment which require a greater degree of control. The proposed wording does not prohibit variations which will occur due to normal production tolerances. The reference to mechanical or electrical changes has to do with deliberate design or construction changes. The Commission does not consider this requirement too stringent and in order to maintain proper control in its type approval program, permissive design changes cannot be allowed.

47. *Sections 2.985–2.995 inclusive.* Relatively little comment was received on these sections which enumerate the measured data to be submitted with application for type acceptance. EIA–BES points out, with respect to § 2.993(a), that it is impractical to make open field measurements of large broadcast transmitters installed in buildings and recommends that the term, "radiated mean output power" may be ambiguous for certain classes of transmitters. For example, it is pointed out, the average power output of a television transmitter changes with brightness of the picture and it is not possible to indicate what the mean power is. EIA–BES recommends therefore that "rated power output" be used in its place. The Commission recognizes the problem in making open field measurements of large broadcast transmitters installed in buildings and the possible ambiguity in the term "radiated mean output power". In view of this, § 2.993 has been changed to allow measurements that are not made in an open field, but only upon a reasonable showing as to necessity. The Commission agrees with this recommendation of EIA–BES and has substituted the term "rated power output" in place of "radiated mean power output" in the text of § 2.993.

48. GTE Sylvania, with GTE Lenkurt concurring, requests that the Commission identify the data in the rules that will be available for release under § 0.457. Moreover, it requests that any non-specific requirements such as that in § 2.995(e) under which the Commission reserves the right to request additional frequency stability data under conditions that are not specified, be limited to valid regulatory purposes and that such data be automatically exempt from disclosure

[10] 47 CFR 1.1120.

under § 0.457. GTE, in this connection, points out that, if the Commission is to receive generous and uninhibited cooperation from the manufacturer, it must afford him corresponding protection. The question of disclosure of information has been discussed in paragraphs 17 to 24 of this report and need not be reargued at this point. The Commission would point out that a request for nondisclosure of such information may be submitted pursuant to § 0.459 of the rules.

49. *Section 2.1001.* EIA-Land Mobile commented that the proposed Section 2.1001 omits a class of permissive change which is included in the existing § 2.584 (c). The omitted class of permissive change includes those which bring the performance of the equipment outside the manufacturer's rated limits as originally filed but not below the minimum requirements of the applicable rules. EIA-Land Mobile believes that this class of permissive change should be retained, contending that it is in the public interest for manufacturer's ratings to exceed the Commission's requirements. The Commission agrees and has included this class of permissive change in the rules adopted herein. GTE Sylvania, with GTE Lenkurt concurring, believes that the definition of a type in § 2.1001(a) should be stated in functional terms rather than in terms of specific component or equipment type; for example the type of semiconductor circuitry, Sylvania claims, should be unimportant if the requirements for functional electrical and mechanical interchangeability are met. The Commission does not agree. One method of control to determine when a change in type has been made is an examination by the Commission's staff of the circuit configurations and tube or semi-conductor functions in an equipment. This means of determining when a change has been made is significant, especially since a change in tube or semi-conductor circuitry is often needed to alter the parameters upon which the original type acceptance grant was based. Accordingly the requirement of § 2.1001(a) will remain unchanged.

50. Accordingly, *it is ordered* effective March 25, 1974, That paragraph (d) of § 0.457 is amended, that Subpart F of Part 2 is deleted, and that a new Subpart J is added to Part 2. The revised rules adopted herein are set out in Appendices B and C to this order. Authority for these amendments is contained in section 4(i), 302 and 303(r) of the Communications Act of 1934, as amended.

51. *It is ordered further,* That the requirement for bilateral certification of low power communication devices, which have heretofore been subject to self-certification, shall become effective on September 1, 1974.

52. *It is ordered further,* That this proceeding is terminated.

(Secs. 4, 303, 48 Stat., as amended, 1066, 1082, & Sec. 302, 82 Stat. 290; (47 U.S.C. 154, 302, 303))

Adopted: February 6, 1974.

Released: February 15, 1974.

FEDERAL COMMUNICATIONS COMMISSION,

[SEAL] VINCENT J. MULLINS,
Secretary.

APPENDIX A

COMMENTS IN THIS PROCEEDING WERE FILED BY THE FOLLOWING PARTIES

Aerospace and Flight Test Radio Coordinating Council (AFTRCC).
Amana Refrigeration, Inc.
American Telephone and Telegraph Co. (AT&T) on behalf of itself, Bell Telephone Laboratories Inc. and Western Electric Co., Inc.
Branson Instruments, Inc.
Collins Radio Company.
Door Operator and Radio Controls Manufacturers Assn. (DORCMA).
Electronic Industries Association of Japan (EIA Japan).
Electronic Industries Association (EIA).
Separate comments were filed by the following groups of EIA:
Consumer Electronics Group (EIA–CEG).
Broadcast Equipment Section of the Communications and Industrial Division (EIA–BES).
Land Mobile Section of the Communications and Industrial Division (EIA-Land Mobile).
Special Purpose Tubes Section of Tube Division (EIA-Tubes).
Gamewell Radio Systems (a Gulf and Western Systems Co.).
GTE Lenkurt Inc.
GTE Sylvania Inc.
Hoffman-LaRoche Inc.
Institute of Electrical and Electronics Engineers, Committee on High Frequency Heating (IEEE).
Litton Industries, Atherton Division.
LPB Inc.
Mann-Russell Electronics, Inc.
Mosler Safe Co.
Reeve Electronics, Inc.
Society of the Plastics Industry, Inc. (SPI).
Votator Division of Chemtron Corp.
Westinghouse Electric Corp., Electronic Tube Division.

REPLY COMMENTS WERE FILED BY

General Electric Co.
GTE Sylvania, Inc.
National Association of Manufacturers (NAM).

APPENDIX B

Paragraph (d) of § 0.457 of Part 0 is amended to read as follows:

§ 0.457 Records not routinely available for inspection.

* * * * *

(d) *Trade secrets and commercial or financial information obtained from any person and privileged or confidential, 5 U.S.C. 552(b)(4) and 18 U.S.C. 1905.* Section 552(b)(4) is specifically applicable to trade secrets and commercial or financial information but is not limited to such matters. Under this provision, the Commission is authorized to withhold from public inspection materials which would be privileged as a matter of law if retained by the person who submitted them, and materials which would not customarily be released to the public by that person, whether or not such materials are protected from disclosure by a privilege. See, Attorney General's Memorandum on the Public Information Section of the Administrative Procedure Act, June 1967, at pages 32–34.

(1) The materials listed in this subparagraph have been accepted, or are being accepted, by the Commission on a confidential basis pursuant to 5 U.S.C. 552(b)(4). To the extent indicated in each case, the materials are not routinely available for public inspection. If the protection afforded is sufficient, it is unnecessary for persons submitting such materials to submit therewith a request for non-disclosure pursuant to § 0.459. A persuasive showing as to the reasons for inspection will be required in requests for inspection of such materials submitted under § 0.461.

(i) Financial reports submitted by licensee of broadcast stations pursuant to § 1.611 of this chapter or by radio and television networks are not routinely available for public inspection.

(ii) Applications for equipment authorizations (type acceptance, type approval or certification), and materials relating to such applications, are not routinely available for public inspection prior to the effective date of the authorization. The effective date of the authorization will, upon request, be deferred to a date no earlier than that specified by the applicant. Following the effective date of the authorization, the application and related materials (including technical specifications and test measurements) will be made available for inspection upon request pursuant to § 0.461.

(iii) Financial reports submitted for CATV systems pursuant to § 76.405 of this chapter.

(2) Prior to July 4, 1967, the rules and regulations provided that certain materials submitted to the Commission would not be made available for public inspection or provided assurance, in varying degrees, that requests for nondisclosure of certain materials would be honored. See, e.g., 47 CFR (1966 ed.) 0.417, 2.557, 5.204, 5.255, 15.70, 21.406, 81.506, 83.436, 87.153, 89.215, 91.208, 91.605 and 93.208. Materials submitted under these provisions are not routinely available for public inspection. To the extent that such materials were accepted on a confidential basis under the then existing rules, they are not routinely available for public inspection. The rules cited in this subdivision were superseded by the provisions of this paragraph, effective July 4, 1967. Equipment authorization information accepted on a confidential basis between July 4, 1967 and March 25, 1974, will not be routinely available for inspection and a persuasive showing as to the reasons for inspection of such information will be required in requests for inspection of such materials submitted under § 0.461.

(i) Unless the materials to be submitted are listed in paragraph (d)(1) of this section and the protection thereby afforded is adequate, it is important for any person who submits materials which he wishes withheld from public inspection under 5 U.S.C. 552(b)(4) to submit therewith a request for non-disclosure pursuant to § 0.459. If it is shown in the request that the materials contain trade secrets or commercial, financial or technical data which would customarily be guarded from competitors, the materials will not be made routinely available for inspection; and a persuasive showing as to the reasons for inspection will be required in requests for inspection submitted under § 0.461. In the absence of a

request for non-disclosure, the Commission may, in the unusual instance, determine on its own motion that the materials should not be routinely available for public inspection. Ordinarily, however, in the absence of such a request, materials which are submitted will be made available for inspection upon request pursuant to § 0.461, even though some question may be present as to whether they contain trade secrets or like matter.

* * * * *

APPENDIX C

1. Part 2 is amended by deleting the present text and title of Subpart F and inserting the word Reserved.

2. Part 2 is amended by inserting the following new Subpart J.

Subpart J—Equipment Authorization Procedures Type Approval; Type Acceptance; Certification

GENERAL PROVISIONS

Sec.
2.901 Basis and purpose.
2.903 Type approval.
2.905 Type acceptance.
2.907 Certification.
2.908 Identical defined.

APPLICATION PROCEDURES

2.909 Written application required.
2.911 Fees.
2.912 Fees for type approval.
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2.915 Grant of application.
2.917 Dismissal of application.
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CONDITIONS ATTENDANT TO GRANT OF EQUIPMENT AUTHORIZATION

2.927 Limitations on grant.
2.929 Nonassignability of an equipment authorization.
2.931 Responsibility of the grantee.
2.932 Modification of equipment.
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2.934 Change in name of grantee.
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2.936 FCC Inspection.
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2.939 Revocation or withdrawal of equipment authorization.
2.941 Availability of information relating to grants.
2.943 Submission of equipment for testing.
2.945 Sampling tests of equipment compliance.

TYPE APPROVAL

2.961 Cross reference.
2.963 Application for type approval.
2.965 Submission of equipment for type approval testing.
2.967 Changes in type approved equipment.
2.969 Information required on identification label for type approved equipment.

TYPE ACCEPTANCE

2.981 Cross reference.
2.983 Application for type acceptance.
2.985 Measurements required: RF power output.
2.987 Measurements required: Modulation characteristics.
2.989 Measurements required: Occupied bandwidth.
2.991 Measurements required: Spurious emissions at antenna terminals.
2.993 Measurements required: Field strength of spurious radiation.
2.995 Measurements required: Frequency stability.
2.997 Frequency spectrum to be investigated.
2.999 Measurement procedure.
2.1001 Changes in type accepted equipment.
2.1003 Information required on identification label for type accepted equipment.

CERTIFICATION

2.1031 Cross reference.
2.1033 Application for certification under Part 15.
2.1035 Abbreviated procedure for identical or private label equipment.
2.1037 Application for certification under Part 18.
2.1039 On-site certification of ISM equipment.
2.1041 Measurement procedure.
2.1043 Changes in certificated equipment.
2.1045 Information required on identification label for certificated equipment.

FILING FOR APPLICATION REFERENCE

2.1061 Submission of technical information for application reference.
2.1063 Disclaimer re technical information filed for application reference.
2.1065 Identification and changes in equipment information filed for application reference.

GENERAL PROVISIONS

§ 2.901 Basis and purpose.

(a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated. In addition to the technical standards provided, the rules governing the service may require that such equipment receive equipment authorization from the Commission by one of the following procedures: type approval, type acceptance, or equipment certification.

(b) The following sections describe the procedures to be followed in obtaining type approval, type acceptance or certification from the Commission and the conditions attendant to such a grant.

§ 2.903 Type approval.

(a) Type acceptance is an equipment authorization issued by the Commission based on examination and measurement of one or more sample units by the Commission at its laboratory.

(b) Type acceptance attaches to all units subsequently marketed by the grantee which are identical (See § 2.908) in all respects to the sample tested by the Commission or include only changes expressly authorized by the Commission.

§ 2.905 Type acceptance.

(a) Type approval is an equipment authorization issued by the Commission for equipment to be used pursuant to a station authorization. Type acceptance is based on representations and test data submitted by the applicant.

(b) Type approval attaches to all units marketed by the grantee which are identical (See § 2.908) to the sample tested except for permissive changes or other changes expressly authorized by the Commission.

§ 2.907 Certification.

(a) Certification is an equipment authorization issued by the Commission for equipment designed to be operated without individual license under Parts 15 and 18 of its rules, based on representations and test data submitted by the applicant.

(b) Certification attaches to units subsequently marketed by the grantee which are identical (See § 2.908) to the sample tested except for permissive changes or other changes expressly authorized by the Commission.

§ 2.908 Identical defined.

As used in §§ 2.903, 2.905 and 2.907, the term identical means identical within the variation that can be expected to arise as a result of quantity production techniques.

APPLICATION PROCEDURES

§ 2.909 Written application required.

(a) An application for equipment authorization shall be filed on a form prescribed by the Commission.

(b) Each application shall be accompanied by all information required by this Subpart and by those Parts of the rules governing operation of the equipment, and by requisite test data, diagrams, etc., as specified in this Subpart and in those sections of rules whereunder the equipment is to be operated.

(c) Each application including amendments thereto, and related statements of fact required by the Commission, shall be personally signed by the applicant if the applicant is an individual; by one of the partners if the applicant is a partnership; by an officer, if the applicant is a corporation; or by a member who is an officer, if the applicant is an unincorporated association: *Provided, however,* That it will be sufficient if the application is signed by the head of an entity's engineering, technical, production, etc., department, with an indication of that representative's title, such as plant manager, etc.

(d) Technical test data shall be signed by the person who performed or supervised the tests. The person signing the test data shall attest to the accuracy of such data. The Commission may require such person to submit a statement showing that he is qualified to make or supervise the required measurements.

(e) The signatures of the applicant and the person certifying the test data shall be made personally by those persons on the original application; copies of such documents may be conformed. Signatures and certifications need not be made under oath.

§ 2.911 Fees.

No application for an equipment authorization will be accepted for processing unless it is accompanied by the fees prescribed in the Commission's schedule of fees in Subpart G of Part 1 of this Chapter.

§ 2.912 Fees for type approval.

(a) An application for type approval must be accompanied by the filing fee prescribed in § 1.1120 of this Chapter.

(b) Each grant of type approval is expressly conditioned (1.1102(d)) upon payment of the requisite grant fee prescribed in § 1.1120 of this Chapter. Failure to remit the specified grant fee within the time prescribed will result in rescission of the type approval which will then become null and void.

§ 2.913 Fees for type acceptance or certification.

(a) An application for type acceptance or for certification must be accompanied by the combined filing and grant fees prescribed in § 1.1120 of this Chapter.

(b) If the application is withdrawn, denied or dismissed and no grant is issued, the grant fee that had been paid will be refunded pursuant to § 1.1103(c).

§ 2.915 Grant of application.

(a) The Commission will grant an application for type approval, type acceptance, or certification if it finds from an examination of the application and supporting data, or other matter which it may officially notice, that:

(1) The equipment is capable of complying with pertinent technical standards of the rule part(s) under which it is to be operated; and,

(2) A grant of the application would serve the public interest, convenience and necessity.

(b) Grants will be made in writing showing the effective date of the grant and any special condition(s) attaching to the grant.

(c) Neither type approval, type acceptance nor certification shall attach to any equipment, nor shall any equipment authorization be deemed effective, until the application has been granted.

§ 2.917 Dismissal of application.

(a) An application which is not in accordance with the provisions of this Subpart may be dismissed.

(b) Any application, upon written request signed by the applicant or his attorney, may be dismissed prior to a determination granting or denying the authorization requested.

(c) If an applicant is requested by the Commission to file additional documents or information and fails to submit the requested material within 60 days, the application may be dismissed.

(d) An application for type approval which has been accepted by the Commission in which the equipment required to be tested is not received by the Commission's Laboratory within six months following the date of the application, may be dismissed.

§ 2.919 Denial of application.

If the Commission is unable to make the findings specified in § 2.915(a), it will deny the application. Notification to the applicant will include a statement of the reasons for the denial.

§ 2.921 Hearing on application.

Whenever it is determined that an application for equipment authorization presents substantial factual questions relating to the qualifications of the applicant or the equipment (or the effects of the use thereof), the Commission may designate the application for hearing. A hearing on an application for an equipment authorization shall be conducted in the same manner as a hearing on a radio station application as set out in Subpart B of Part 1 of this chapter.

§ 2.923 Petition for reconsideration; application for review.

Persons aggrieved by virtue of an equipment authorization action may file with the Commission a petition for reconsideration or an application for review. Rules governing the filing of petitions for reconsideration and applications for review are set forth in §§ 1.106 and 1.115, respectively, of this chapter.

§ 2.925 Identification of equipment.

(a) Each equipment for which an equipment authorization has been granted shall be uniquely identified with a name and type or model number inscribed on a plate or label. The detailed information to be inscribed on this plate or label is set out in the rules for the particular form of equipment authorization required.

(b) The identification plate or label shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase.

(c) Where it is shown that a permanently affixed label is not desirable or feasible, an alternative method of positively identifying the equipment may be used if approved by the Commission. The proposed alternative method of identification and the justification for its use must be included with the application for the equipment authorization.

(d) The type or model number specified in the grant of equipment authorization will be identical to that assigned by the manufacturer or applicant and given in the application for the equipment authorization. This number shall consist of a series of Arabic numerals or capital letters or a combination thereof, and may include punctuation marks and spaces. The total of Arabic numerals, capital letters, punctuation marks and spaces in any assigned type or model number shall not exceed 17.

(e) The type or model number assigned to the equipment shall be one which has not been used previously in conjunction with the same name that will be on the equipment.

CONDITIONS ATTENDANT TO A GRANT OF AN EQUIPMENT AUTHORIZATION

§ 2.927 Limitations on grants.

(a) A grant of an equipment authorization is effective until revoked or withdrawn, rescinded, surrendered, or a termination date is otherwise established by the Commission.

(b) A grant of an equipment authorization signifies that the Commission has determined that the equipment has been shown to be capable of compliance with the applicable technical standards if no unauthorized change is made in the equipment and if the equipment is properly maintained and operated. The issuance of an equipment authorization should not be construed as a finding by the Commission with respect to matters not encompassed by the Commission's rules.

(c) No person shall, in any advertising matter, brochure, etc., use or make reference to an equipment authorization in a deceptive or misleading manner or convey the impression that such equipment authorization reflects more than a Commission determination that the device or product has been shown to be capable of compliance with the applicable technical standards of the Commission's rules.

§ 2.929 Nonassignability of an equipment authorization.

(a) An equipment authorization issued by the Commission may not be assigned, exchanged or in any other way transferred to a second party.

(b) The grantee of an equipment authorization may license or otherwise authorize a second party to manufacture or market the equipment covered by the grant of the equipment authorization provided:

(1) The equipment manufactured by such second party bears the identical name and number as is set out in the grant of the equipment authorization.

NOTE.—Any change in the name or number desired as a result of such production or marketing agreement will require the filing of a new application for an equipment authorization as specified in § 2.933.

(2) The grantee of the equipment authorization shall continue to be responsible to the Commission for the equipment produced pursuant to such an agreement.

(3) Notice that such a licensing agreement has been entered in shall be provided to the Commission within 30 days after the execution of the agreement. The notice shall indicate with specificity the equipment involved, the date of application and date of grant of the equipment authorization, and shall indicate the provisions that the grantee has made to insure that equipment manufactured by such licensee will continue to comply with the Commission's regulations. The Commission may require the submission of additional information (new measurement data, etc.) depending on the circumstances in the particular case.

§ 2.931 Responsibility of the grantee.

(a) In accepting a grant of an equipment authorization the grantee warrants that each unit of equipment marketed under such grant and bearing the name and type or model number specified in the grant will conform to the uhit that was measured and that the data (design and rated operational characteristics) filed with the application for type acceptance or certification, or measured by the Commission in the case of type approved equipment, continues to be representative of the equipment being produced under such grant within the variation that can be expected due to quantity production and testing on a statistical basis.

(b) For each model or type of equipment for which an equipment authorization has been issued the grantee shall maintain the records listed below:

(1) A record of the original design drawings and specifications and all changes that have been made.

(2) A record of the procedures used for production inspection and testing to ensure the conformance required by paragraph (a) of this section.

(c) The records listed in paragraph (b) of this section shall be retained for three years after the manufacture of said equipment item has been discontinued or for such longer period that may be specified, or until the conclusion of an investigation or a proceeding, if the grantee is officially notified that an investigation or any other administrative proceeding involving his equipment has been instituted.

§ 2.932 Modification of equipment.

(a) A new application for an equipment authorization shall be filed whenever there is a change in the design, circuitry or construction of an equipment or device for which an equipment authorization has been issued, except as provided in paragraphs (b), (c), and (d) of this section.

(b) Permissive changes may be made in a type accepted equipment pursuant to § 2.1001.

(c) Permissive changes may be made in a certificated equipment pursuant to § 2.1043.

(d) For changes in type approved equipment the procedure in § 2.967 shall apply.

§ 2.933 Change in identification of equipment.

(a) A new application for an equipment authorization shall be filed whenever there is a change in the identification of the equipment with or without a change in design, circuitry or construction.

(b) An application filed pursuant to paragraph (a) of this section where no change in design, circuitry or construction is involved, need not be accompanied by a resubmission of equipment or measurement or test data customarily required with a new application, unless specifically requested by the Commission. In lieu thereof, the applicant shall attach a statement setting out:

(1) The original identification used on the equipment prior to the change in identification.

(2) The date of the original grant of the equipment authorization.

(3) The original type approval number assigned by the Commission, if one was assigned.

(4) How the equipment bearing the modified identification differs from the original equipment.

(5) Whether the data previously filed with the Commission (or measured by the Commission in the case of type approved equipment) continues to be representative of and applicable to the equipment bearing the changed identification.

(6) In the case of type accepted equipment, the photographs required by § 2.983(f).

(7) In the case of certificated equipment, the photographs required by § 2.1033(c).

(c) If the change in identification also involves a change in design or circuitry which falls outside the purview of a permissive change described in §§ 2.1001 or 2.1043, a complete application shall be filed pursuant to § 2.909.

§ 2.934 Change in name of grantee.

Whenever there is a change in the name of the grantee of an equipment authorization, notice of such change must be received by the Commission not later than 60 days after the grantee starts using the new name.

§ 2.935 Change in control of grantee.

In the case of a transfer of control of the grantee of an equipment authorization, as in the case of sale or merger of the grantee, notice of such transfer must be received by the Commission not later than 60 days subsequent to the consummation of the agreement effecting the transfer of control. Depending on the circumstances in each case, the Commission may require new applications for equipment authorization for each device or equipment held by the predecessor in interest, production of which will be continued by the acquiring party.

§ 2.936 FCC inspection.

Each grantee of an equipment authorization shall upon reasonable request, submit the following to the Commission or shall make the following available for inspection:

(a) The device or equipment covered by the grant of equipment authorization.

(b) The record of design drawings and specifications required by § 2.931(b)(1).

(c) The record of the procedures used for production inspection and testing required by § 2.931(b)(2).

(d) The manufacturing plant and facilities.

§ 2.937 Equipment defect and/or design change.

When a complaint is filed with the Commission concerning the failure of equipment marketed under an equipment authorization to comply with pertinent requirements of the Commission's rules, and the Commission determines that the complaint is justified and arises out of an equipment fault attributable to the grantee, the Commission may require the grantee to investigate such complaint and report the results of such investigation to the Commission. The report shall also indicate what action if any has been taken or is proposed to be taken by the grantee to correct the defect, both in terms of future production and with reference to articles in the possession of users, sellers and distributors.

§ 2.939 Revocation or withdrawal of equipment authorization.

(a) The Commission may revoke any equipment authorization:

(1) For false statements or representations made either in the application or in materials or response submitted in connection therewith or in records required to be kept by § 2.931(b).

(2) If upon subsequent inspection or operation it is determined that the equipment does not conform to the pertinent technical requirements or to the representations made in the original application.

(3) If it is determined that changes have been made in the equipment other than those authorized by the rules or otherwise expressly authorized by the Commission.

(4) Because of conditions coming to the attention of the Commission which would warrant it in refusing to grant an original application.

(b) Revocation of an equipment authorization shall be made in the same manner as revocation of radio station licenses.

(c) The Commission may withdraw any equipment authorization in the event of changes in its technical standards. The procedure to be followed will be set forth in the order promulgating such new technical standards (after appropriate rulemaking proceedings) and will provide a suitable amortization period for equipment in hands of users and in the manufacturing process.

§ 2.941 Availability of information relating to grants.

(a) Grants of equipment authorizations other than receiver certifications will be publicly announced in a timely manner by the Commission. Information about a receiver certification may be obtained by contacting the Office of the Chief Engineer.

(b) Information relating to equipment authorizations such as data submitted by the applicant in connection with an authorization application, laboratory tests of the device, etc., shall be available in accordance with § 0.457 of this chapter.

§ 2.943 Submission of equipment for testing.

(a) The Commission may require an applicant for type acceptance or certification to submit one or more sample units for measurement at the Commission's laboratory.

(b) In the event the applicant believes that shipment of the sample to the Commission's laboratory is impractical because of the size or weight of the equipment, or the power requirement, or for any other reason, the applicant may submit a written explanation why such shipment is impractical and should not be required.

§ 2.945 Sampling tests of equipment compliance.

The Commission will, from time to time, call in various equipments for which authorizations have been granted, to determine the extent to which subsequent production of such equipment continues to comply with the data filed by the applicant (or measured by the Commission in the case of type approved equipment). Shipping costs to the Commission's laboratory and return shall be borne by the grantee.

TYPE APPROVAL

§ 2.961 Cross reference.

The provisions of this subpart, §§ 2.901 et seq., shall apply to applications for and grant of type approval.

§ 2.963 Application for type approval.

(a) An application for type approval shall be filed on FCC Form 729 with all questions answered.

(b) The application shall be filed by the party whose name will be placed on the equipment.

(c) If the applicant is not the manufacturer of the equipment, he shall attach a statement explaining the relationship between the applicant and the manufacturer accompanied by a confirming statement from the actual manufacturer.

(d) The applicant shall attach a statement containing a technical description of the equipment sufficiently complete to develop all the factors concerning compliance with the technical standards of the applicable rules. The description should include the information listed below. If an item is not applicable, this should be stated.

(1) Type(s) of emission.

(2) Frequency range.

(3) Range of operating power and description of means provided for variation of operating power.

(4) Maximum power rating as defined in the applicable rules.

(5) The voltages applied to and currents into the several elements of the final radio frequency amplifying device for normal operation over the power range. Indicate whether these voltages and currents are DC or AC.

(6) Function of each electron tube, semiconductor or other active circuit device.

(7) Complete circuit diagram.

(8) Instruction book(s). If the instruction book(s) is not available when the application is filed a set of draft instructions should be provided and the complete instruction book(s) should be submitted not later than 60 days after the grant of type approval, or such later date as may be specified.

(9) Tune up procedure over the power range or at specific operating power levels.

(10) A description of all circuitry and devices provided for determining and stabilizing frequency.

(11) A description of any circuits or devices employed for suppression of spurious radiation, for limiting modulation, and for limiting the operating power.

(12) A photograph or drawing of the equipment identification plate or label showing the information to be placed thereon.

§ 2.965 Submission of equipment for type approval testing.

After an application for type approval has been filed and accepted by the Commission, the applicant will be given instructions concerning the shipment of the equipment to the Commission's Laboratory. After testing is completed, the equipment will be returned to the applicant. Shipping costs to the Commission's Laboratory and return shall be borne by the applicant.

§ 2.967 Changes in type approved equipment.

(a) No mechanical or electrical change whatsoever may be made in a type approved equipment without prior approval by the Commission.

(b) A grantee desiring to make a change shall file an application on Form 729 accompanied by the appropriate fees. The grantee shall attach a description of the change(s) and shall indicate whether the change(s) will be made in all units (including previous production) or will be made only in those units produced after the change(s) is authorized.

(c) If the Commission authorizes the change(s) requested, it may require the assignment of a new type or model number.

§ 2.969 Information required on identification label for type approved equipment.

In the case of an equipment that has been type approved, the identification plate or label required by § 2.925 shall contain the following information:

(a) Name of the grantee of the type approval.

(b) The words "TYPE NO." or "MODEL NO." followed by the number assigned to the equipment by the grantee.

(c) The words "FCC TYPE APPROVAL NO." followed by the type approval number assigned by the FCC, if a type approval number has been assigned.

(d) Any other statement or labeling requirement imposed by the rules governing the operation of this equipment.

TYPE ACCEPTANCE

§ 2.981 Cross reference.

(a) The general provisions of this subpart, §§ 2.901 et seq., shall apply to applications for and grants of type acceptance.

§ 2.983 Application for type acceptance.

An application for type acceptance shall be filed on FCC Form 723 by the party whose name will be placed on the equipment and shall include the following information either in answer to the questions on the form or as attachments thereto.

(a) Name of applicant indicating whether the applicant is the manufacturer of the equipment, a vendor other than the manufacturer (include the name of manufacturer), a licensee or a prospective licensee.

(b) Identification of equipment for which type acceptance is sought.

(c) Information whether quantity (more than one) production is planned.

(d) Technical description of the equipment sufficiently complete to develop all the factors concerning compliance with the technical standards of the applicable rule part(s). The description shall include the following items:

(1) Type or types of emission.

(2) Frequency range.

(3) Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.

(4) Maximum power rating as defined in the applicable part(s) of the rules.

(5) The dc voltages applied to and dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

(6) Function of each electron tube or semiconductor or other active circuit device.

(7) Complete circuit diagrams.

(8) Instruction book(s). If the instruction book(s) is not available when the application is filed a set of draft instructions should be provided and the complete instruction book(s) should be submitted not later than 60 days after the grant of type acceptance, or such later date as may be specified.

(9) Tune-up procedure over the power range, or at specific operating power levels.

(10) A description of all circuitry and devices provided for determining and stabilizing frequency.

(11) A description of any circuits or devices employed for suppression of spurious radiation, for limiting modulation, and for limiting power.

(e) The data required by §§ 2.985 through 2.997, inclusive, measured in accordance with the procedures set out in § 2.999.

(f) A photograph or drawing of the equipment identification plate or label showing the information to be placed thereon.

(g) Photographs (8''x10'') of the equipment of sufficient clarity to reveal equipment construction and layout, including meters, if any, and labels for controls and meters and sufficient views of the internal construction to define component placement and chassis assembly. Insofar as these requirements are met by photographs or drawings contained in instruction manuals supplied

with the type acceptance request, additional photographs are necessary only to complete the required showing.

§ 2.985 Measurements required: RF power output.

(a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in § 2.983(d)(5). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

(b) For single sideband, independent sideband, and single channel, controlled carrier radiotelephone transmitters the procedure specified in subparagraph (a) of this paragraph shall be employed and, in addition, the transmitter shall be modulated during the test as follows. In all tests, the input level of the modulating signal shall be such as to develop rated peak envelope power or carrier power, as appropriate, for the transmitter.

(1) Single sideband transmitters in the A3A or A3J emission modes—by two tones at frequencies of 400 Hz and 1800 Hz (for 3.0 kHz authorized bandwidth), or 500 Hz and 2100 Hz (3.5 kHz authorized bandwidth), or 500 Hz and 2400 Hz (for 4.0 kHz authorized bandwidth), applied simultaneously, the input levels of the tones so adjusted that the two principal frequency components of the radio frequency signal produced are equal in magnitude.

(2) Single sideband transmitters in the A3H emission mode—by one tone at a frequency of 1500 Hz (for 3.0 kHz authorized bandwidth), or 1700 Hz (for 3.5 kHz authorized bandwidth), or 1900 Hz (for 4.0 kHz authorized bandwidth), the level of which is adjusted to produce a radio frequency signal component equal in magnitude to the magnitude of the carrier in this mode.

(3) As an alternative to paragraphs (b) (1) and (2) of this paragraph other tones besides those specified may be used as modulating frequencies, upon a sufficient showing of need. However, any tones so chosen must not be harmonically related, the third and fifth order intermodulation products which occur must fall within the −25 dB step of the emission bandwidth limitation curve, the seventh and ninth order intermodulation product must fall within the 35 dB step of the referenced curve and the eleventh and all higher order products must fall beyond the −35 dB step of the referenced curve.

(4) Independent sideband transmitters having two channels by 1700 Hz tones applied simultaneously in both channels, the input levels of the tones so adjusted that the two principal frequency components of the radio frequency signal produced are equal in magnitude.

(5) Independent sideband transmitters having more than two channels by an appropriate signal or signals applied to all channels simultaneously. The input signal or signals shall simulate the input signals specified by the manufacturer for normal operation.

(6) Single-channel controlled-carrier transmitters in the A3 emission mode—by a 2500 cps tone.

(c) For measurements conducted pursuant to paragraphs (a) and (b) of this section, all calculations and methods used by the applicant for determining carrier power or peak envelope power, as appropriate, on the basis of measured power in the radio frequency load attached to the transmitter output terminals shall be shown. Under the test conditions specified, no components of the emission spectrum shall exceed the limits specified in the applicable rule parts as necessary for meeting occupied bandwidth or emission limitations.

§ 2.987 Measurements required: Modulation characteristics.

(a) Voice modulated communication equipment: A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 cps shall be submitted. For equipment required to have an audio low-pass filter, a curve showing the frequency response of the filter, or of all circuitry installed between the modulation limiter and the modulated stage shall be submitted.

(b) Equipment which employs modulation limiting: A curve or family of curves showing the percentage of modulation versus the modulation input voltage shall be supplied. The information submitted shall be sufficient to show modulation limiting capability throughout the range of modulating frequencies and input modulating signal levels employed.

(c) Single sideband and independent sideband radiotelephone transmitters which employ a device or circuit to limit peak envelope power: A curve showing the peak envelope power output versus the modulation input voltage shall be supplied. The modulating signals shall be the same in frequency as specified in paragraph (c) of § 2.989 for the occupied bandwidth tests.

(d) Other types of equipment: A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

§ 2.989 Measurement required: Occupied bandwidth.

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable:

(a) Radiotelegraph transmitters for manual operation when keyed at 16 dots per second.

(b) Other keyed transmitters—when keyed at the maximum machine speed.

(c) Radiotelephone transmitters equipped with a device to limit modulation or peak envelope power shall be modulated as follows. For single sideband and independent sideband transmitters, the input level of the modulating signal shall be 10 dB greater than that necessary to produce rated peak envelope power.

(1) Other than single sideband or independent sideband transmitters—when modulated by a 2500 cps tone at an input level 16 dB greater than that necessary to produce 50 percent modulation. The input level shall be established at the frequency of maximum response of the audio modulating circuit.

(2) Single sideband transmitters in A3A or A3J emission modes—when modulated by two tones at frequencies of 400 Hz and 1800 Hz (for 3.0 kHz authorized bandwidth), or 500 Hz and 2100 Hz (for 3.5 kHz authorized bandwidth), or 500 Hz and 2400 Hz (for 4.0 kHz authorized bandwidth), applied simultaneously. The input levels of the tones shall be so adjusted that the two principal frequency components of the radio frequency signal produced are equal in magnitude.

(3) Single sideband transmitters in the A3H emission mode—when modulated by one tone at a frequency of 1500 Hz (for 3.0 kHz authorized bandwidth), or 1700 Hz (for 3.5 kHz authorized bandwidth), or 1900 Hz (for 4.0 kHz authorized bandwidth), the level of which is adjusted to produce a radio frequency signal component equal in magnitude to the magnitude of the carrier in this mode.

(4) As an alternative to paragraphs (C)(2) and (3) of this section, other tones besides those specified may be used as modulating frequencies, upon a sufficient showing of need. However, any tones so chosen must not be harmonically related, the third and fifth order intermodulation products which occur must fall within the −25 dB step of the emission bandwidth limitation curve, the seventh and ninth order products must fall within the −35 dB step of the referenced curve and the eleventh and all higher order products must fall beyond the −35 dB step of the referenced curve.

(5) Independent sideband transmitters having two channels—when modulated by 1700 Hz tones applied simultaneously to both channels. The input levels of the tones shall be so adjusted that the two principal frequency components of the radio frequency signal produced are equal in magnitude.

(d) Radiotelephone transmitters without a device to limit modulation or peak envelope power shall be modulated as follows. For single sideband and independent sideband transmitters, the input level of the modulating signal should be that necessary to produce rated peak envelope power.

(1) Other than single sideband or independent sideband transmitters—when modulated by a 2500 cps tone of sufficient level to produce at least 85 percent modulation. If 85 percent modulation is unattainable, the highest percentage modulation shall be used.

(2) Single sideband transmitters in A3A or A3J emission modes—when modulated by two tones at frequencies of 400

Hz and 1800 Hz (for 3.0 kHz authorized bandwidth), or 500 Hz and 2100 Hz (for 3.5 kHz authorized bandwidth), or 500 Hz and 2400 Hz (for 4.0 kHz authorized bandwidth), applied simultaneously. The input levels of the tones shall be so adjusted that the two principal frequency components of the radio frequency signal produced are equal in magnitude.

(3) Single sideband transmitters in the A3H emission mode—when modulated by one tone at a frequency of 1500 Hz (for 3.0 kHz authorized bandwidth), or 1700 Hz (for 3.5 kHz authorized bandwidth), or 1900 Hz (for 4.0 kHz authorized bandwidth), the level of which is adjusted to produce a radio frequency signal component equal in magnitude to the magnitude of the carrier in this mode.

(4) As an alternative to paragraphs (d) (2) and (3) of this section, other tones besides those specified may be used as modulating frequencies, upon a sufficient showing of need. However any tones so chosen must not be harmonically related, the third and fifth order intermodulation products which occur must fall within the −25 dB step of the emission bandwidth limitation curve, the seventh and ninth order products must fall within the −35 dB step of the referenced curve and the eleventh and all higher order products must fall beyond the −35 dB step of the referenced curve.

(5) Independent sideband transmitters having two channels—when modulated by 1700 Hz tones applied simultaneously to both channels. The input levels of the tones shall be so adjusted that the two principal frequency components of the radio frequency signal produced are equal in magnitude.

(e) Transmitters for use in the Radio Broadcast Services:

(1) Standard broadcast transmitters—when modulated 85 percent by a 7500 Hz input signal.

(2) FM broadcast transmitter not used for multiplex operation—when modulated 85 percent by a 15 kHz input signal.

(3) FM broadcast transmitters for multiplex operation under Subsidiary Communication Authorization (SCA)—when carrier is modulated 70 percent by a 15 kHz main channel input signal, and modulated an additional 15 percent simultaneously by a 67 kHz subcarrier (unmodulated).

(4) FM broadcast transmitter for stereophonic operation—when modulated by a 15 kHz input signal to the main channel, a 15 kHz input signal to the stereophonic subchannel, and the pilot subcarrier simultaneously. The input signals to the main channel and stereophonic subchannel each shall produce 38 percent modulation of the carrier. The pilot subcarrier should produce 9 percent modulation of the carrier.

(5) Television broadcast aural transmitters—when modulated 85 percent by a 15 kHz input signal.

(f) Transmitters for which peak frequency deviation (D) is determined in accordance with § 2.202(f), and in which the modulating baseband comprises more than 3 independent speech channels—when modulated by a test signal determined in accordance with the following:

(1) A modulation reference level is established for the characteristic baseband frequency. (Modulation reference level is defined as the average power level of a sinusoidal test signal delivered to the modulator input which provides the specified value of per-channel deviation.)

(2) Modulation reference level being established, the total rms deviation of the transmitter is measured when a test signal consisting of a band of random noise, extending from below 20 kHz to the highest frequency in the baseband, is applied to the modulator input through any preemphasis networks used in normal service. The average power level of the test signal shall exceed the modulation reference level by the number of decibels determined using the appropriate formula in the following table:

Number of telephone channels that modulate the transmitter	*Number of dB by which the average power level of the test signal shall exceed the modulation reference level*
More than 3 and less than 12	To be specified by the equipment manufacturer subject to FCC approval.
At least 12 and less than 60	$2.6+2 \log_{10} N_c$.
At least 60 and less than 240	$-1+4 \log_{10} N_c$.
240 or more	$-15+10 \log_{10} N_c$.

Where N_c is the number of baseband telephone channels in radio systems employing multichannel multiplex telephony. See § 2.202(e) in this Chapter.

(g) Transmitters in which the modulating baseband comprises not more than three independent channels—when modulated by the full complement of signals for which the transmitter is rated. The level of modulation for each channel should be set to that prescribed in rule parts applicable to the services for which the transmitter is intended. If specific modulation levels are not set forth in the rules, the tests should provide the manufacturer's maximum rated condition.

(h) Transmitters designed for other types of modulation—when modulated by an appropriate signal of sufficient amplitude to be representative of the type of service in which used. A description of the input signal should be supplied.

§ 2.991 Measurements required: Spurious emissions at antenna terminals.

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.989 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 2.993 Measurements required: Field strength of spurious radiation.

(a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of § 2.989, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from half-wave dipole antennas.

(b) The measurements specified in paragraph (a) of this section shall be made for the following equipment:

(1) Those in which the spurious emissions are required to be 60 dB or more below the mean power of the transmitter.

(2) All equipment operating on frequencies higher than 25 MHz.

(3) All equipment where the antenna is an integral part of, and attached directly to the transmitter.

(4) Other types of equipment as required, when deemed necessary by the Commission.

§ 2.995 Measurements required: Frequency stability.

(a) The frequency stability shall be measured with variation of ambient temperature as follows:

(1) From −30° to +50° centigrade for all equipment except that specified in subparagraphs (2) and (3) of this paragraph.

(2) From −20° to +50° centigrade for equipment to be licensed for use in the Maritime Services under Parts 81 and 83 of this chapter and equipment to be licensed for use above 952 MHz at operational fixed stations in all services, stations in the Local Television Transmission Service and Point-to-Point

Microwave Radio Service under Part 21, and equipment licensed for use aboard aircraft in the Aviation Services under Part 87 of this chapter.

(3) From 0° to +50° centigrade for equipment to be licensed for use in the Radio Broadcast Services under Part 73 of this chapter.

(b) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10° centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.

(c) In addition to all other requirements of this section, the following information is required for equipment incorporating heater type crystal oscillators to be used in mobile stations, for which type acceptance is first requested after March 25, 1974, except for battery powered, hand carried, portable equipment having less than 3 watts mean output power.

(1) Measurement data showing variation in transmitter output frequency from a cold start and the elapsed time necessary for the frequency to stabilize within the applicable tolerance. Tests shall be made after temperature stabilization at each of the ambient temperature levels; the lower temperature limit 0° centigrade and +30° centigrade with no primary power applied.

(2) Beginning at each temperature level specified in paragraph (c)(1) of this section, the frequency shall be measured within one minute after application of primary power to the transmitter and at intervals of no more than one minute thereafter until ten minutes have elapsed or until sufficient measurements are obtained to indicate clearly that the frequency has stabilized within the applicable tolerance, whichever time period is greater. During each test, the ambient temperature shall not be allowed to rise more than 10° centigrade above the respective beginning ambient temperature level.

(3) The elapsed time necessary for the frequency to stabilize within the applicable tolerance from each beginning ambient temperature level as determined from the tests specified in this paragraph shall be specified in the instruction book for the transmitter furnished to the user.

(4) When it is impracticable to subject the complete transmitter to this test because of its physical dimensions or power rating, only its frequency determining and stabilizing portions need be tested.

(d) The frequency stability shall be measured with variation of primary supply voltage as follows:

(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

(2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.

(3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.

(e) When deemed necessary, the Commission may require tests of frequency stability under conditions in addition to those specifically set out in paragraphs (a) (b) (c) and (d) of this section. (For example measurements showing the effect of proximity to large metal objects, or of various types of antennas, may be required for portable equipment).

§ 2.997 Frequency spectrum to be investigated.

In all of the measurements set forth in §§ 2.991 and 2.993 of this part, the spectrum should be investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency or to the highest frequency practicable in the present state of the art of measuring techniques, whichever is lower. Particular attention should be paid to harmonics and subharmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency. Radiation at the frequencies of multipler stages should also be checked. The amplitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be reported.

§ 2.999 Measurement procedure.

The Commission may consider data which have been measured in accordance with established standards and measurement procedures as published by engineering societies and associations such as the Electronic Industries Association, the Institute of Electrical and Electronics Engineers, Inc. and the American National Standards Institute. Specific reference should be made to the standard(s) used. If a published standard is not used the applicant shall submit a detailed description of the measurement procedure actually used. In either case, he shall submit a listing of the test equipment used.

§ 2.1001 Changes in type accepted equipment.

(a) Equipment of the same type is defined for the purposes of type acceptance as being equipment which is electrically and mechanically interchangeable. In addition, transmitters of the same type will have the same basic tube or semiconductor line up, frequency multiplication, basic frequency determining and stabilizing circuitry, basic modulator circuit and maximum power rating.

(b) Two classes of permissive changes may be made in type accepted equipment without requiring a new application for and grant of type acceptance.

(1) A Class I permissive change includes those modifications in the equipment which do not change the equipment characteristics beyond the rated limits established by the manufacturer and accepted by the Commission when type acceptance is granted, and which do not change the type of equipment as defined in paragraph (a) of this section. No filing with the Commission is required for a Class I permissive change.

(2) A Class II permissive change includes those modifications which bring the performance of the equipment outside the manufacturer's rated limits as originally filed but not below the minimum requirements of the applicable rules, and do not change the type of equipment as defined in paragraph (a) of this section. When a Class II permissive change is made by the grantee, he shall supply the Commission with complete information and results of tests of the characteristics affected by such change. The modified equipment shall not be marketed under the existing grant of type acceptance prior to acknowledgement by the Commission that the change is acceptable.

(3) When a Class II permissive change is made by other than the grantee of type acceptance, the information and data specified in paragraph (2) of this section shall be supplied by the person making the change. The modified equipment shall not be operated under an authorization of the Commission prior to acknowledgement by the Commission that the change is acceptable.

(c) A grantee desiring to make a change other than a permissive change as described in paragraph (b) of this section, shall file an application on Form 723 accompanied by the required fees. The grantee shall attach a description of the change(s) to be made and a statement indicating whether the change(s) will be made in all units (including previous production) or will be made only in those units produced after the change(s) is authorized.

(d) If the Commission authorizes the change requested, it may require the assignment of a new type number.

(e) Users shall not modify their own equipment except as provided by paragraph (b) of this section.

§ 2.1003 Information required on identification label for type accepted equipment.

In the case of an equipment that has been type accepted, the identification plate or label required by § 2.925 shall contain the following information:

(a) Name of the grantee of the type acceptance.

(b) The words "TYPE NO." followed by the number assigned to the equipment by the grantee. If the name plate contains information in addition to that required by this section the words "TYPE NO." may be preceded by the words "FCC DATA:" to facilitate the selection of the identifier used by the Commission in its grant of type acceptance.

NOTE: If the equipment involved is a transceiver containing transmitting and receiving capability and a single identifier is used, the marking of paragraph (b) shall be used. If the transmitter part and the receiver part are assigned separate identifiers, the marking of paragraph (b) shall be replaced with "TRANSMITTER TYPE NO." and "RECEIVER MODEL NO.". These words may be prefixed by the term "FCC DATA", if desired.

(c) Any other statement or labeling requirement imposed by the rules governing the operation of this equipment.

CERTIFICATION

§ 2.1031 Cross reference.

The general provisions of this subpart § 2.901 et seq. shall apply to applications for and grants of certification.

§ 2.1033 Application for certification under Part 15.

(a) An application for certification shall be filed on FCC Form 722 with all items answered. Items that do not apply shall be so noted.

(b) The application shall be accompanied by the required fees, report of measurements, and such other attachments as specified in Part 15 for the particular equipment.

(c) The application shall be accompanied by a photograph, 8" x 10" in size, showing the front of the equipment. If the identification plate does not appear on this photograph, or is too small to be read, a second photograph, 8" x 10" in size, shall be attached showing the identification plate in sufficient detail so that the name and number can be read. In lieu of the second photograph, a sample label, or a facsimile thereof, may be attached with a sketch showing where this label will be placed on the equipment.

§ 2.1035 Abbreviated procedure for identical or private label equipment.

(a) Application for certification of a private label equipment or an equipment bearing a new model number which is essentially identical to a previously certificated equipment shall be filed on FCC Form 722. Items that do not apply shall be so noted.

(b) The application shall be accompanied by the required fees.

(c) In lieu of the report of measurements and other attachments required by § 2.1033(b), the application may be accompanied by a statement setting forth.

(1) The name and the model number of the previously certificated receiver.

(2) The date when certification was granted.

(3) A description of how the new equipment differs from the previously certificated equipment.

(4) A statement that the data previously filed is applicable to and representative of the new equipment.

(d) The application shall be accompanied by a photograph, 8" x 10" in size, showing the front of the equipment. If the identification plate does not appear on this photograph, or is too small to be read, a second photograph, 8" x 10" in size, shall be attached showing the identification plate in sufficient detail so that the name and number can be read. In lieu of the second photograph, a sample label, or a facsimile thereof, may be attached with a sketch showing where this label will be placed on the equipment.

§ 2.1037 Application for prototype certification of ISM equipment.

(a) An application for prototype certification of ISM equipment may be submitted only for equipment that will be produced in quantity and which can be tested on a suitable test site.

(b) The application shall be filed on FCC Form 722 with all items answered. Items that do not apply shall be so noted.

(c) The application shall be accompanied by the required fees, a report of measurements and such other attachments as are specified in Part 18 for the particular equipment.

(d) The application shall be accompanied by a statement that the model (or type) for which prototype certification is requested will be produced in quantity, that the equipment lends itself to testing on a test site, and that the results of such measurements can be expected to represent the performance of that model (or type) wherever installed.

§ 2.1039 On-site certification of ISM equipment.

(a) Part 18 provides for on-site certification of ISM equipment which is not built in quantity or which does not lend itself to measurement on a test site.

(b) On-site certification shall be performed on the equipment after it is installed for operation in accordance with the procedures set out in Part 18 for the particular equipment.

§ 2.1041 Measurement procedure.

The measurement procedures are specified in the rules governing the particular device for which certification is requested.

§ 2.1043 Changes in certificated equipment.

(a) Changes may be made in equipment for which certification has been granted provided such change does not affect the characteristics required to be reported, and does not result in a change in name or model number.

(b) A change which affects the characteristics required to be reported requires a new application for, and grant of certification. The Commission may require such modified equipment to be identified with a new model number.

(c) A change which results in a new name and/or model number (with or without change in circuitry) requires a new application for, and grant of, certification. If the change affects the characteristics required to be reported, a complete application shall be filed. If the characteristics required to be reported are not changed the abbreviated procedure of § 2.1035 may be used.

§ 2.1045 Information required on identification label for certificated equipment.

In the case of an equipment that has been certificated, the identification plate or label required by § 2.925 shall contain the following information.

(a) Name of the grantee of certification. Alternatively the name of the manufacturer or the private label trade name may be used provided this information was set out in the application for certification. The name used on the identification plate or label shall be identical to that on any exterior surface of the equipment.

(b) The words "MODEL NO." followed by the number assigned to the equipment by the grantee. If the identification label contains other numbers in addition to that required by this section, such other numbers shall be preceded by terms such as "SERVICE NO.", "CATALOG NO." or other similar term, to avoid confusion with the Commission required identifier following "MODEL NO.". The words "MODEL NO." may be preceded by the term "FCC DATA:" to facilitate the selection of the identifying number used by the Commission in its grant of certification.

NOTE.—If the equipment involved is a transceiver containing transmitting and receiving capability and a single identifier is used, the marking of paragraph (b) shall be replaced with the words "TYPE NO.". If the transmitter part and the receiver part are assigned separate identifiers, the marking of paragraph (b) shall be replaced with "TRANSMITTER TYPE NO." and "RECEIVER MODEL NO.". These words may be prefixed by the term "FCC DATA", if desired.

(c) Any other statement or labeling requirement imposed by the rules governing the operation of this equipment.

FILING FOR APPLICATION REFERENCE

§ 2.1061 Submission of technical information for application reference.

An application for station authorization in some services requires a detailed technical description of the equipment proposed to be used. In order to simplify the preparation and processing of applications by eliminating the need for the submission of equipment specifications with each application, the Commission will accept for application reference purposes detailed technical specifications of equipment designed for use in these services. Manufacturers desiring to avail themselves of this procedure should submit all information required by the application form and the rules for the services in which the equipment is to be used. An application for a station authorization submitted subsequent to such filing

may refer to the technical information so filed.

§ 2.1063 Disclaimer re technical information filed for application reference.

Receipt by the Commission of data for application purposes does not imply that the Commission has made or intends to make any finding regarding the acceptability of the equipment for licensing and such equipment will not be included on the list of equipment acceptable for licensing. Each applicant is expected to exercise appropriate care in the selection of equipment to insure that the unit selected will comply with the rules governing the service in which it is proposed to operate.

§ 2.1065 Identification and changes in equipment information filed for application reference.

(a) Each type of equipment, for which information is filed for application reference purposes, shall be identified by a type number assigned by the manufacturer of the equipment. The type number shall consist of a series of Arabic numerals or capital letters or a combination thereof, and may include punctuation marks and spaces in any assigned Arabic numerals, capital letters, punctuation marks and spaces in any assigned type number shall not exceed 17. The type number shall be shown on an identification plate or label affixed in a conspicuous place to such equipment.

(b) If the assignment of a different type number is required as a result of equipment modification, a new identification plate or label bearing the new type number shall be affixed to the modified equipment.

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